

IN THE CLAIMS

Claims 1-21 (canceled).

22. (currently amended) An object tracking method for detecting and tracking an object in a picked-up image based on an image signal acquired by an imaging unit, comprising the steps of:

a) producing a template image cut out from the ~~of a predetermined size~~ including a part of said object from an image acquired from said imaging unit so as to include a part of said object;

b) conducting a template matching by calculating correlations between a present image from said imaging unit and said template image, and detecting a position of a part of said present image matched with said template image, and updating a position of ~~as a current template~~ by said ~~detected position~~ image;

c) detecting an image changing area between at least two frames of images picked up at different time points by said imaging unit; and

d) detecting and updating a position of said object based on said detected image changing area; ~~and setting the detected position of said object as a new template image in place of said current template image.~~

e) updating a template image by an image output as a new template image based on the updated position of said object

23. (currently amended) An object tracking method according to claim 22, wherein said step d) includes a substep of detecting, within based ~~on said detected image changing area,~~ an area expanded ~~having a greatest difference or a difference equal to or larger than a predetermined~~ pixels from

the current template, a position of area having a greatest difference or a difference equal to or larger than a predetermined value between the said two frames as said position of said object.

24. (previously presented) An object tracking method according to claim 22, wherein said step d) includes a substep of setting a search area for detecting the position of said object based on the position of said current template image, and detecting an area having a greatest difference or a difference equal to or larger than a predetermined value between the said two frames as said position of said object in said set search area.

25. (previously presented) An object tracking method according to claim 24, wherein said step d) includes a substep of enlarging or moving said set search range stepwise.

26. (currently amended) An object tracking apparatus for detecting and tracking an object in a picked-up image based on an image signal acquired by an imaging unit, comprising:

an image input unit which produces a template image cut out from the image converts video signals acquired from by said imaging unit so as to include a part of said object sequentially into image signals; and

a processing unit which conducts a template matching by calculating correlations between a present image from said processes the image signals converted by said image input unit and said template image, detects a position of a part of said present image matched with said template image.

and updates position of current template by said detected position, in a predetermined sequence,

wherein said processing unit further detects an image changing area between at least two frames of images picked up at different time points by said imaging unit, produces a template image of a predetermined size including a part of said object from an image acquired from said imaging unit; conducts a template matching between a present image from said imaging unit and said template image, and detects a position of a part of said present image matched with said template image as a current template image; detects and updates a position of said object based on said detected an image changing area, and between at least two frames of images picked up at different time points by said imaging unit; and detects a position of said object based on said detected image changing area and sets the detected position of said object as a new template image in place of said current template image updates a template image by an image output as a new template image based on the updated position of said object.

27. (previously presented) An object tracking apparatus according to claim 26, wherein said processing unit sets a search area for detecting the position of said object based on the position of said current template image, and detects an area having a greatest difference or a difference equal to or larger than a predetermined value between the said two frames as said position of said object in said set search area.

28. (previously presented) An object tracking apparatus according to claim 26, wherein said processing unit sets a search area for detecting the position of said object based on the position of said current template image, and detects an area having a greatest difference or a difference equal to or larger than a predetermined value between the said two frames as said position of said object in said set search area.

29. (previously presented) An object tracking apparatus according to claim 28, wherein said processing unit enlarges or moves said set search range stepwise.